



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/721,660

11/25/2003

Senthil Natesan

N0178US

7410

37583 7590 12/22/2009  
NAVTEQ NORTH AMERICA, LLC  
425 West RANDOLPH STREET  
SUITE 1200, PATENT DEPT  
CHICAGO, IL 60606

EXAMINER

LIN, SHEW FEN

ART UNIT

PAPER NUMBER

2166

MAIL DATE

DELIVERY MODE

12/22/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/721,660	<b>Applicant(s)</b> NATESAN ET AL.	
	<b>Examiner</b> SHEW-FEN LIN	<b>Art Unit</b> 2166	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 47,48,51,52 and 54-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47,48,51,52 and 54-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

- a. This action is taken to response to Request for Continued Examination filed on 10/1/2009.
- b. Claims 47-48, 51-52, and 54-65 are pending. Claims 47, 56, and 64 are independent claims.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 1, 2009 has been entered.

### ***Claim Objections***

Claim 47, line 23, recites "specified criteria". It is unclear whether this is intended to be the same as or different from "specified criteria" in line 21.

Claims 47, 56, and 64 recite the limitations "the server", "said server", the Examiner suggests using either "said" or "the" as a reference to the same server previously introduced.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2166

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 47-48, 51-52, 54-61 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machii et al. (US Patent 6,324,467, hereinafter Machii) in view of Livshutz et al. (European Patent Application, EP 0943894A2, 9/22/1999, hereinafter Livshutz).**

**As to claim 47**, Machii discloses a method of operation for a server in a navigation system (Fig. 2) comprising:

on a server (Figs. 2, 13, col. 3, lines 1-4), using a repository for geographic data (Fig. 4, item 405, abstract, map data base), wherein the repository contains a plurality of pre-computed parcels of geographic data (Fig. 14, col. 18, lines 48-50, map mesh and associated data of roads),

Machii discloses a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Fig. 14, col. 10, lines 13-15, col. 18, lines 48-50, map mesh and associated data of roads) but does not explicitly disclose wherein the geographic data in each of the parcels represent geographic features contained in a separate one of a plurality of geographic sub-areas into which a geographic region is divided.

Livshutz discloses wherein the geographic data in each of the parcels represent geographic features contained in a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Figs. 5, 7-9, abstract, paragraph 0043, 0044, geographic database includes a plurality of data records that represent geographic features, the plurality of records are organized into a plurality of parcels).

Therefore it would have been obvious for persons of ordinary skills in the art at the time of the applicant's invention to divide map into map meshes and associate geographic features such as route, street, and building within the intersecting meshes, as explicitly demonstrated by Livshutz and implicitly demonstrated by Machii.

Machii in view of Livshutz further discloses:

on the server, receiving a request for a route from an origin to a destination (Machii, Fig. 2, 203, 218, Fig. 7, col. 1, lines 25-27, Livshutz, paragraph 0020, a request for a route to a desired destination);

on the server, calculating a route from said origin to said destination (Machii, Fig. 2, 209, Fig. 4, item 406, route computing unit, Livshutz, Fig. 5, 136, paragraph 0012, 0023, 0032, route calculation, calculating a route between two locations);

on the server, after said step of calculating the route, using the calculated route to identify the geographic sub-areas that are crossed by the calculated route (Machii, Fig. 14, col. 18, lines 1-3, After calculation of a route has been finished, the server 1302 selects roads and information which is to be transmitted to the terminal 1306 from map meshes 1404 to 1410);

on the server, identifying the parcels that contain the data that represent the geographic features encompassed in the geographic sub-areas that the route passes through (Machii, abstract, Figs. 3, 11, 14, col. 17, line 56 to col. 18, line 43, the server 1302 selects roads and information which is to be transmitted to the terminal 1306 from map meshes 1404 to 1410)

transmitting data that represents the calculated route to an end user computing platform (Machii, abstract, Fig. 2, 211, route information including a map based on the calculated guide route is to be transmitted to the terminal); and

transmitting all of the data contained in the parcels that represent the geographic features encompassed in the geographic sub-areas said route passes through to the end user computing platform (Machii, Fig. 2, 204, 211, Fig. 9, 905, Livshutz, paragraph 0009, 0031-0033, 0045, 0112, the navigation application program is being run, load data into memory based upon the physical geographic locations of the features which the data represent or upon the geographical proximity of the features which the data represent and data are organized into parcels, the data transmitted to the end-user over a wireless communications link, When a parcel of data is accessed, all of its data records 322, 323, are read from the medium into the memory of the navigation system at the same time. see also).

on the end user computing platform, storing said transmitted parcels in a memory associated with the end user computing platform (Machii, Fig. 2, 204, col. 5, lines 28-38, col. 7,

lines 10-17, the terminal 1306 receives the computed information on the route and the identified map display location from the server 1302, and stores them in the memory 101);

on the end user computing platform, after said step of storing the transmitted parcels in the memory, receiving a request for a point of interest based upon specified criteria (Livshutz, Fig. 5, 139, paragraph 0026, point-of -interest, such as a hotel or civic center, a boundary of a natural feature, such as a lake, or a position along a railroad track or ferry): and

on the end user computing platform, using data from the transmitted parcels to find said point of interest based upon specified criteria (Livshutz, Para. 0042) without making a request to said server (Machii, Fig. 11, col. 16, lines 6-9, Livshutz, Fig. 5, Para. 0042, note that the combination teaching of Machii and Livshutz sending map data with geographic features such as school, post office to the user computing platform in the transmitted parcels, as such, information for POI is already in the user computing platform and don't need to make a request back to server ).

**As to claim 48**, Machii in view of Livshutz discloses the method of claim 47, wherein said parcels of geographic data are less than a maximum data size (Livshutz, paragraph 0043).

**As to claim 51**, Machii in view of Livshutz discloses the method of claim 47, further comprising: on the end user computing platform, using data from said transmitted parcels to display a map (Machii, Fig. 2, 211, Livshutz, Fig. 5, 137, paragraph 0035, using these different layers of cartographic data, the map display function can provide rapid panning and zooming.)

**As to claim 52**, Machii in view of Livshutz discloses the method of claim 47, further comprising: on the end user computing platform, using data from said transmitted parcels to explicate said route (Machii, Fig. 2, 204, Fig. 14, Livshutz, paragraph 0023, lines 13-15, route guidance, wherein detailed directions are provided for reaching a desired destination).

**As to claim 54**, Machii in view of Livshutz discloses the method of claim 47, wherein the specified criteria include location-based criteria (Livshutz, paragraph 0026, The location 114 may correspond to a position of a point-of-interest, such as a hotel or civic center, a boundary of a natural feature, such as a lake, or a position along a railroad track or ferry. The locations 114 may correspond to anything physically located in the geographic area 112).

**As to claim 55**, Machii in view of Livshutz discloses the method of claim 47, wherein the repository includes a plurality of collections of geographic data, wherein each collection represents the entire geographic region, wherein each collection is organized into a plurality of parcels, each of said parcel is less than a maximum size and wherein the parcels in one of said plurality of collections contains data that represents different attributes of the represented geographic features than the parcels in another of said plurality of collections (Livshutz, Figs. 9, 11, abstract, paragraph 0014, 0030, 0043).

**As to claim 56**, Machii discloses a navigation system (Fig. 2) comprising:  
a server (Machii, Fig. 2, col. 3, lines 1-4, Fig. 13, 1302);



a repository for geographic data associated with the server (Fig. 4, item 405, abstract, map data base), wherein the repository contains pre-computed parcels of geographic data (Fig. 14, col. 18, lines 48-50, map mesh and associated data of roads).

Machii discloses a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Fig. 14, col. 10, lines 13-15, col. 18, lines 48-50, map mesh and associated data of roads) but does not explicitly disclose wherein each of the pre-computed parcels of geographic data corresponds to a separate one of a plurality of geographic sub-areas into which a geographic region is divided.

Livshutz discloses wherein each of the pre-computed parcels of geographic data corresponds to a separate one of a plurality of geographic sub-areas into which a geographic region is divided (Figs. 5, 7-9, abstract, paragraph 0043, 0044, geographic database includes a plurality of data records that represent geographic features, the plurality of records are organized into a plurality of parcels).

Therefore it would have been obvious for persons of ordinary skills in the art at the time of the applicant's invention to divide map into map meshes and associate geographic features such as route, street, and building within the intersecting meshes, as explicitly demonstrated by Livshutz and implicitly demonstrated by Machii.

Machii in view of Livshutz further discloses:

a route calculation application performed on the server that calculates a route from an origin to a destination (Machii, Fig. 2, 203, 218, Fig. 7, col. 1, lines 25-27, Livshutz, Fig. 5, 136, Fig. 6, paragraph 0012, 0023, 0112, route calculation); and

a geographic data providing application performed on the server (Machii, Figs. 2, 13, Fig. 4, item 406, route computing unit, Livshutz, paragraph 0112, The navigation application program and the geographic database need not be located in the same location, but may be connected over a network. The geographic database may be located remotely from the end-user and the data transmitted to the end-user over a wireless communications link, see also);

a geographic data providing application performed on the server that uses the calculate route to identify the geographic sub-areas that are crossed by the calculated route (Machii, Figs. 3, 11, 14, col. 17, line 56 to col. 18, line 43, After calculation of a route has been finished, the server 1302 selects roads and information which is to be transmitted to the terminal 1306 from map meshes 1404 to 1410) and transmits to a client computing platform from the server data that represents the calculated route (abstract, Fig. 2, 211, route information including a map based on the calculated guide route is to be transmitted to the terminal) and from said repository all of the data contained in the parcels that contain the data that represent the geographic features encompassed in said geographic sub-areas said route passes through (Machii, Fig. 2, 204, 211, Fig. 9, 905, Livshutz, paragraph 0009, 0031-0033, 0045, 0112, the navigation application program is being run, load data into memory based upon the physical geographic locations of the features which the data represent or upon the geographical proximity of the features which the data represent and data are organized into parcels, the data transmitted to the end-user over a wireless communications link, When a parcel of data is accessed, all of its data records 322, 323, are read from the medium into the memory of the navigation system at the same time), wherein said transmitted data is stored in a local memory associated with the client computing platform (Machii, Fig. 2, 204, col. 5, lines 28-38, col. 7, lines 10-17, the terminal 1306 receives the

computed information on the route and the identified map display location from the server 1302, and stores them in the memory 101);

a point of interest look up application on the end user computing platform that receives a request for a point of interest (Livshutz, Fig. 5, 139, paragraph 0026, point-of-interest, such as a hotel or civic center, a boundary of a natural feature, such as a lake, or a position along a railroad track or ferry) and uses the transmitted data stored in the local memory to identify the requested point of interest without making a request to said server (Machii, Fig. 11, col. 16, lines 6-9, Livshutz, Fig. 5, Para. 0042, note that the combination teaching of Machii and Livshutz sending map data with geographic features such as school, post office to the user computing platform in the transmitted parcels, as such, information for POI is already in the user computing platform and don't need to make a request back to server).

**As to claim 57**, Machii in view of Livshutz discloses the method of claim 56, wherein said pre-computed parcels of geographic data have a substantially uniform data size (paragraph 0081, maintain a uniform parcel size among the parcels within the layer).

**As to claim 58**, Machii in view of Livshutz discloses the method of claim 56, wherein said repository for geographic data and said geographic data providing application are associated with a server (Machii, Fig. 4, 405).

**As to claim 59**, Machii in view of Livshutz discloses the method of claim 56, further comprising: a route guidance application that uses data contained in said parcels from a local

Art Unit: 2166

memory associated with said client computing platform to provide maneuvering instructions for following said route (Machii, Fig. 3, col. 3, lines 56-57, a terminal for providing a route guide showing directions to a destination, Livshutz, Fig. 5, 138, paragraph 0023, lines 13-15, route guidance, wherein detailed directions are provided for reaching a desired destination).

**As to claim 60**, Machii in view of Livshutz discloses the method of claim 56, further comprising: a map display application that uses data contained in said parcels from a local memory associated with said client computing platform to provide a map of said route on a display (Machii, Fig. 2, 204, Livshutz, paragraph 0002, show detailed maps on computer displays outlining routes to destinations, the types of maneuvers to be taken at various locations along the routes, locations of certain types of features, Fig. 5, 137, paragraph 0035, using these different layers of cartographic data, the map display function can provide rapid panning and zooming, paragraph 0112).

**As to claim 61**, Machii in view of Livshutz discloses the method of claim 56, further comprising: a positioning application that uses data contained in said parcels from a local memory associated with said client computing platform to determine a position of an end user computing platform relative to roads represented by data contained in said parcels (Machii, Fig. 1, col. 5, lines 39-47, Livshutz, Fig. 1, 24, paragraph 0028, 0112, provide geographic positions).

**As to claim 64**, has the same subject matter as of claim 47 and as such rejected under the same rationale. Furthermore, Machii disclose a mobile computing platform (Fig. 13, col. 1, lines 9-10, col. 5, lines 10-25).

**As to claim 65**, Machii in view of Livshutz discloses the method of claim 64, further including: using data from said parcels in said local memory to provide navigation- related features (Machii, Fig. 2, Livshutz, paragraph 0023).

**Claims 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machii and Livshutz, and further in view of Drury et al. (US Patent 6,707,421, hereinafter Drury).**

**As to claims 62-63**, Machii in view of Livshutz discloses navigation application provide these various navigation features and functions including route guidance and destination resolution capabilities (Livshutz, paragraph 0023) but does not explicitly disclose determining whether an end user computing platform has departed from said route and wherein if said end user computing platform has departed from said route, said positioning application calculates a way back to said route.

Drury discloses determining whether an end user computing platform has departed from said route (Fig. 17, column 20, lines 39-58, if at any time the difference between the dead reckoning position and the (D)GPS based position is more than the off-route tolerance, then a off-route routine is initiated) and wherein if said end user computing platform has departed from said route, said positioning application calculates a way back to said route (column 9, lines 15-

Art Unit: 2166

36, detect when the vehicle has diverged too far from the planned route. When it detects that the vehicle is off-route, it plans a corrected route based on the main roads map shown in FIG. 10 which get the vehicle back onto the originally planned route).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Machii in view of Livshutz to include determining if an end user computing platform has departed from the planned route and planning a corrected route to get back onto the originally planned route as taught by Drury for the purpose of providing the operator with instructions to continue to guide the vehicle to the destination despite the error (column 5, lines 13-17, Drury). The skilled artisan would have been motivated to improve the invention of Livshutz and Machii per the above such that navigation system will guide the operator to the destination even if the operator could be off-route due to error or stop by point of interest.

### ***Response to Amendment and Remarks***

Applicant's arguments based on newly amended features with respect to claims 47, 56, 64 have been fully and carefully considered but are moot in view of the new ground(s) of rejection. Refer to the corresponding sections of the claim analysis for details.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shew-Fen Lin /S. L./  
Examiner, Art Unit 2166  
December 16, 2009

/Hosain T Alam/

Supervisory Patent Examiner, Art Unit 2166